

MATERIAL NUMBER 1.4401 · CLASS 1.4

08Ch16N11M3

Material no. 1.4401

also listed as X 5 CrNiMo 18 10

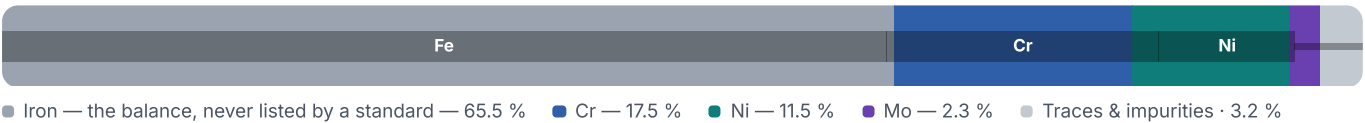
Chemical composition, mechanical and physical property values, and 134 standard designations from 19 regions.

DENSITY 8 g/cm ³	OTHER DESIGNATIONS 134 in 19 regions	PROPERTY VALUES 11 on file
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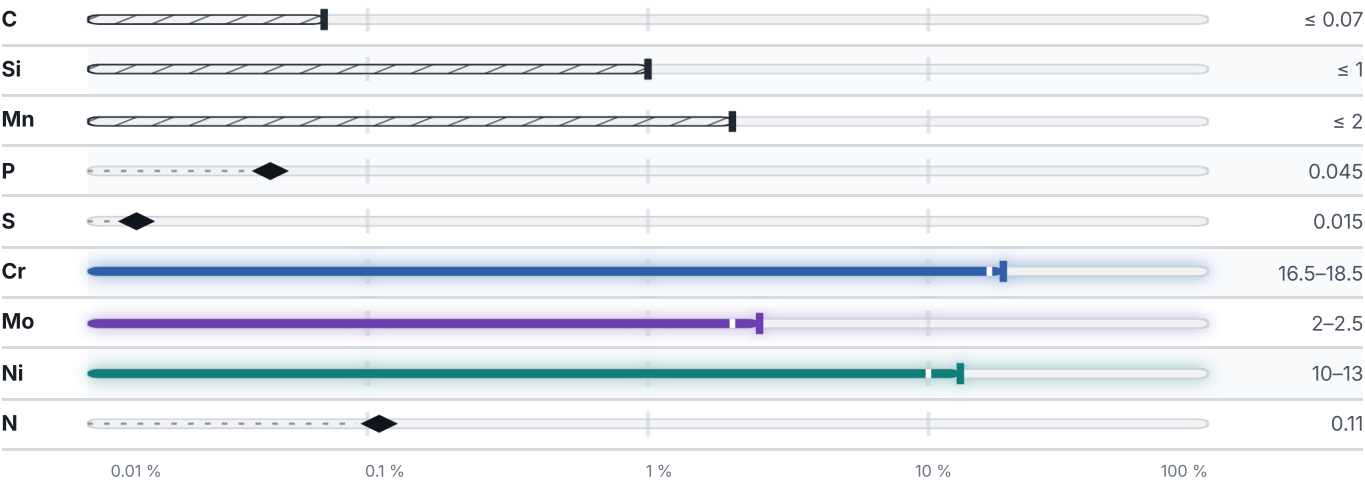
Chemical composition

Mass fraction in %

What this alloy is



Logarithmic scale, 0.01 % to 100 % — every value here compares directly, decade by decade.



The scale is logarithmic, not the element's raw share of the alloy — the only honest way to fit 0.01 % and 100 % in one picture, and it means every value here can be compared with every other.

Predicted transformation temperatures

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Mechanical properties

13 values across 4 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Pipe	540	220	40	55	1500
Pipe	540	220	35	50	1400
COLD ROLLED					HV
Cold rolled					220–400
QUENCHED AND TEMPERED					HB
Quenched and tempered					215
SOLUTION ANNEALED					HB
Solution annealed					200

Physical properties

2 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K
20	7.9	214	–
100	–	–	17.1
200	–	–	17.6
300	–	–	18.1
400	–	184	18.4
500	–	175	19
600	–	–	19.3
700	–	–	19.6
800	–	–	19.8
PROPERTY	VALUE		UNIT
Density	8		g/cm ³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	

134 designations · 5 documented as identical

United States	67	A826	astm
S31600	uns	A831	astm
S31603	uns	A943	astm
S31609 This grade's own name	uns	A965	astm
30316	aisi-sae	A988	astm
316	aisi-sae	F 138	astm
316H This grade's own name	aisi-sae	F1667	astm
316L	aisi-sae	F2215	astm
S31600	aisi-sae	F2281	astm
S31609	aisi-sae	F3184	astm
A 182 Grade F316	astm	F593	astm
A 312 Grade TP316	astm	F594	astm
A 403 Grade WP316	astm	F738	astm
A1012	astm	F836	astm
A1022	astm	F837	astm
A1049	astm	F879	astm
A167	astm	F899	astm
A182	astm	F957	astm
A193	astm	TP316	astm
A194	astm	TP316L	astm
A213	astm		
A240	astm	Japan	13
A249	astm	SUS 316A	jis
A264	astm	SUS 316FB	jis
A269	astm	SUS 316HFB	jis
A270	astm	SUS 316HTB	jis
A271	astm	SUS 316HTP	jis
A276	astm	SUS 316TB	jis
A312	astm	SUS 316TBS	jis
A313	astm	SUS 316TKA	jis
A314	astm	SUS 316TKC	jis
A320	astm	SUS 316TP	jis
A336	astm	SUS F 316	jis
A358	astm	SUS Y 316	jis
A368	astm	SUS316	jis
A376	astm		
A403	astm	United Kingdom	11
A409	astm	316 S 17	bs
A430	astm	316 S 19	bs
A479	astm	316 S 33	bs
A484	astm	316 S 40	bs
A580	astm	316 S 41	bs
A632	astm	316S16	bs
A666	astm	316S31	bs
A688	astm	58J	bs
A793	astm	845	bs
A813	astm	EN58J	bs
A814	astm	S31 EN 58J	bs

United States / Aerospace		9
5507	ams	
5524	ams	
5573	ams	
5584	ams	
5648	ams	
5649	ams	
5653	ams	
5690	ams	
5691	ams	
France		7
Z2CND17-12	afnor	
Z3CND17-11-02	afnor	
Z6CND17-11-02	afnor	
Z6CND17.11	afnor	
Z6CND17.12	afnor	
Z7CND17-11-02	afnor	
Z7CND17-12-02	afnor	
Russia / CIS		6
03Ch17N13M2	gost	
03X17H13M2	gost	
03X17H14M2	gost	
08Ch16N11M3	gost	
08KH16N11M3	gost	
08X16H11M3	gost	
Spain		5
03	une	
F.310.A	une	
F.3534	une	This grade's own name
F.3543	une	
F.3543-X5CrNiMo17-12	une	

Europe		3
1.4401	din-en	
X 5 CrNiMo 18 10	din-en	This grade's own name
X5CrNiMo17-12-2	din-en	This grade's own name
China		2
0Cr17Ni11Mo2	gb	
0Cr17Ni12Mo2	gb	
Poland		2
00H17N14M2	pn	
0H17N12M2T	pn	
Italy		1
X5CrNiMo17-12	uni	
Sweden		1
2347	ss	
Czechia		1
17346	csn	
Slovakia		1
17 346	stn	
Brazil		1
316	abnt	
Serbia		1
Č.4573	srps	
former Yugoslavia		1
Č.4573	jus	
Australia / New Zealand		1
316	as-nzs	
Austria		1
X5CrNiMo17-12-2KW	onorm	

Note on use. The data is compiled to the best of our knowledge from publicly available standards and manufacturer documentation. It replaces neither material testing nor an inspection document to EN 10204. Please request a mill certificate to EN 10204 2.1, 3.1 or 3.2 together with your enquiry. The standard in its current valid edition always prevails.

Enquiry about 08Ch16N11M3

Quotation, availability, mill certificate or a technical question — directly on the material page.

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DATASHEET ONLINE

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GRADE SEARCH

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MATERIAL NO.

1.4401

ISSUED

Aug 20, 2026